

ABSTRACT OF THE INVENTION

Dissipative ceramic bonding tips for wire bonding

5 electrical connections to bonding pads on integrated circuits  
chips and packages are disclosed. In accordance with the  
principles of the present invention, to avoid damaging delicate  
electronic devices by any electrostatic discharge, an ultrasonic  
bonding wedge tool tip must conduct electricity at a rate  
10 sufficient to prevent charge buildup, but not at so high a rate  
as to overload the device being bonded. For best results, a  
resistance in the tip assembly itself should range from  $10^5$  to  
 $10^{12}$  ohms. In addition, the wedges must also have specific  
mechanical properties to function satisfactorily.

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